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In the preceding issue of TIP I used this space to comment on the need for research on group membership as a possible moderator variable influencing the measured validity of personnel tests. I now wish to raise another question with respect to factors reducing test validity. This question focuses on the role of group norms and social pressures in modifying criterion behavior, so that predictions based on test performance may be substantially in error.

That groups of factory workers develop norms of acceptable production, and enforce these, is well-known. The phenomenon is not limited to unionized groups; the famous Western Electric studies, like those of Mathewson, Roy, Wyatt, Hickson and other investigators, show that workers in nonunion shops exercise effective controls over output of individual workers. "Participant observer" studies have shown that, in plants with individual incentive rates, workers sometimes share production so that the slowest workers are boosted and those who are more efficient turn in less work than they have done. Mutual assistance activities have also been observed among white-collar workers.

These social controls over output and over performance records pose serious problems for our criteria of validity. Output ranges are restricted, and incentive earnings are distorted to some extent.

These, however, are not the only cases in which social pressures contaminate the data we have used as criteria for validating personnel measures. Consider the clinical evaluations of candidates for minor executive positions, or of middle managers being considered for promotion. The psychologist may apply aptitude and personality measures, and arrive at logically sound predictions with regard to probabilities of promotion, termination, pay increases, etc. But if a newly hired or promoted executive finds himself excluded from a managerial clique, cut out of the communication network, and quietly sabotaged by peers who reject him on purely irrelevant grounds, he may make a poor record, and will probably leave the firm. Such incidents necessarily lower the obtained validity of the evaluation program. Unfortunately, even careful validity research is not likely to uncover evidence sufficient to identify the operation of these subtle social pressures.

Psychologists working in industry are gradually becoming aware that the factory (or the office) is a social system. Within such a system behavior, including communication, supervision, and decision-making, as well as overt production, must be viewed as determined only in part by intra-individual variables such as aptitudes and motives. Behavior is also constrained by social norms and group pressures. If we are to ascertain what proportion of the obtained variance in worker or executive performance is ascribable to intra-individual attributes, and how much to variables such as group norms and social pressures, we shall have to be considerably more ingenious than we have been in past validity research. I hope that some members of Division 14 will be intrigued by this challenge, and will devise suitable methods for solving the problem.

Ross Stagner

Note to Non-Members

In this issue of TIP in his report of the First Biennial Survey of Salaries of Industrial Psychologists, Fred Wickert states "However, it is my opinion that Division 14 members, as the industrial psychologists who have gone to the extra effort to affiliate with the Division, draw higher salaries and possess qualifications superior to the larger numbers of those who simply call themselves industrial psychologists when asked to check, on a questionnaire, one of a limited number of possible psychological specialties."

Non-members, on the chance that Wickert is right, why not write Al Glickman and Unite! Al is Division 14 Membership Chairman and his address appears in this issue with a plea for information about potential members.

John R. Boulger

OFFICIAL DIVISIONAL BUSINESS

Selected Minutes of Executive Committee

January 6-7, 1966

Flying Carpet Motel
Des Plaines, Illinois

Present: Ash, Baxter, Boulger, Buel, Dunnette, Glickman, Jurgensen, Keenan, Naylor, Owens, Parrish, Perloff, Petrullo, Prien, Uhlaner, Vincent

Absent: Bass, Mahler, Seashore, Stagner

In President Stagner's absence, President-Elect Dunnette presided.

1. Secretary-Treasurer Report.

- a. The Minutes of the last meeting of the Executive Committee were approved.
- b. Dr. Ash read to the Executive Committee a wire from Walter Mahler expressing regret that he could not come because of business in Alaska, and a letter from President Stagner advising that, because of personal reasons, he will return to this country from London by mid-February.
- c. Dr. Ash reported that the balance on hand in the Treasury, as of 12/31/65, amounted to \$3,077.40, and that a bill had just arrived for the November 1965 issue of TIP for \$911. Dr. Ash suggested that at the Spring Executive Committee meeting consideration should be given to a possible increase in the assessment, more adequately to cover the cost of the Newsletter and other Division expenses.

2. Election Committee Report.

The nominations ballot has been published in the November 1965 issue of TIP. Three ballots have been returned to date.

3. Education and Training Committee.

Dr. Naylor reported that the E&T Committee is working on three main projects:

- a. An abstract of the report on the Survey of Post-Doctoral Training needs is in manuscript form.
- b. A new project is being proposed: a survey of the training of industrial psychologists in settings outside of psychology departments (e.g., in schools of business). Dr. Vincent mentioned that the Special Interest Activities Committee has also been planning a survey in this area -- of schools of business administration. After extensive discussion it was recommended by the Executive Committee that the surveys be combined into one, to be undertaken by the E&T Committee, and to be addressed to members of the Division who are on the faculties of graduate schools of business or industrial administration.
- c. The Executive Committee approved the E&T Committee proposal for development of a statement of guidelines for Master's training in industrial psychology. Dr. Naylor reported that the Committee had received favorable comments on the statement of guidelines for doctoral programs.

4. Fellowship Committee.

Mr. Jurgensen reported that TIP has published a call for nominations for fellowship status. He emphasized the need for careful documentation of fellowship candidates. In 1965 it required interviews by the Division Fellowship Committee with the APA Membership Committee to reverse a couple of initially unfavorable actions, based upon incomplete presentation of the candidates' credentials.

5. Membership Committee.

Dr. Glickman reported the following application activity:

Carryover applications	17 (9 associates, 8 members)
Number of expressions of interest in joining Division (APA solicitation)	118
Number of applications requested	28

Number of applications received	9
Number of reviews completed	5

Since the Membership Committee was not unanimous in its recommendations on these last 5, action by the Executive Committee was postponed until the Spring Meeting.

Dr. Glickman pointed out that some applicants for member status experience difficulty in finding two Fellows to endorse their applications, particularly one outside of their organization. It was anticipated that this problem will grow in the future since the proportion of Fellows is expected to decline. After extensive discussion, Dr. Dunnette requested the Membership Committee to review the problem and make recommendations to the Executive Committee for changing the procedure, maintaining current qualifications standards, but making the application process simpler for the candidate. It was urged that such changes should also make it easier for industrial psychologists not now in the Division to join it.

6. Division Newsletter.

Dr. Boulger presented a cost analysis of TIP and indicated that, because of a change in printers, the cost in the future (a) should be less and (b) should be more controllable. The new cost will be at the rate of \$10.83 per page for a 1500-copy issue. Dr. Boulger recommended:

1. that the total budget for Volume 3 be held within the cost of Volume 2, (about \$2350) by keeping the remaining two numbers of Volume 3 small in size,
2. that TIP should continue to carry information about official Division business,
3. that TIP should carry the Presidential Address and occasionally an invited address,
4. that the policy of sending copies to overseas members by airmail be continued,
5. that a survey be conducted of the membership to determine their attitudes toward and evaluation of TIP.

The Executive Committee approved the first recommendation, suggested that the second through fourth were within the judgement and discretion of the editor, and recommended that a survey of the membership be tabled for the present, on the grounds that a probably favorable reaction could be predicted.

7. Professional Affairs Committee.

Dr. Buel reported on the following Committee activities:

- a. A salary survey of industrial psychologists, based on National Scientific Register data, has been completed and prepared for publication in TIP. (Volume 3 Number 2).
- b. An appeal regarding surveys had been prepared by the Committee, and published in TIP Volume 3 Number 1.
- c. The Committee was represented by an observer at the September 2 and 4 meetings of the Conference on Professional and Social Issues in Psychology. The Executive Committee recommended continued contact with COPSIP.
- d. Five cases of questionable ethics have been dealt with by the Committee. Two are closed, one should be closed soon, one requires little or no action, and one of relatively long standing has had new information brought to bear on it.
- e. The Committee proposes to maintain liaison with the APA Committee on the Practice of Psychology in Industry and with ABEPP.

8. Program Committee.

Dr. Keenan reported that Division 14 has 29 program hours at the 1966 APA Convention. A program has been roughly designed, including one day-long integrated program around the theme of Human Performance in the World of Work. A draft of proposed Division "Guidelines for Division Presentations at APA Conventions" has been prepared for distribution to program participants, to improve the quality of their presentations. The Program Committee will write the Division membership encouraging (a) increased participation in regional meetings and (b) participation in the Moscow and Lima meetings and subsequently reviewing these meetings at APA.

It was proposed that, possibly as part of the Program Committee, a Committee on International Industrial Psychology be formed. This proposal will be taken up with Dr. Stagner, Division President.

9. Public Relations Committee.

Dr. Uhlaner proposed, and the Executive Committee agreed, that a substantial effort should be devoted to the revision and updating of "The Psychologist in Industry," with a change in format to make it more readily available. It was proposed that support for such publication be solicited from industrial psychology consulting and service organizations.

10. Committee on Scientific Affairs.

Dr. Petruccio reported that:

- a. The Cattell Award Subcommittee for 1966 was appointed: Bass, Fleishman, McCormick, Glaser (Chairman). Brochures were printed and distributed. Announcements were sent to The American Psychologist and TIP. The awards have been increased as follows: \$500 for the first prize, \$100 each honorable mention.
- b. The Subcommittee on Integrative Writing sent out a letter requesting items to a selected sample of Members and Fellows of Division 14.
- c. The Catalog of Life History Items Subcommittee sent out a release to The American Psychologist and TIP; and a letter in July 1965. Dr. Ash pointed out, however, that the supply of the Catalog is exhausted. Dr. Uhlaner volunteered to explore the possibility of a limited reproduction; Dr. Owens said that he believed he could arrange for a foundation to reproduce it if the Division were willing to relinquish its rights to it.

The Executive Committee discussed the problem of the relationship of selection testing to racial differences. The development of a position paper on this issue has been referred to the Scientific Affairs Committee. Dr. Petruccio and Dr. Ash are to prepare a letter for circulation to other divisions soliciting their interest in and cooperation on this problem.

11. Special Interest Activities Committee.

Dr. Vincent reported that the Committee has decided to work on surveys of degree-granting institutions this year.

One survey, of graduate schools of business administration, has been absorbed into a similar survey by the E&T Committee (see above).

The second survey is designed to help the Division plans to meet the needs of its future members, by anticipating the number of potential New Members and their expanding interests.

The Committee will conduct a mail survey to determine:

1. the number of candidates for Masters and Ph.D. degrees with interest in industrial psychology, and
2. the subjects of theses and dissertations in process.

The questionnaire will be sent to all schools granting Ph.D.'s, as listed in the January issue of the American Psychologist.

12. Workshop Committee.

Dr. Prien reported on the design of the 1966 Workshop program (September 1, 1966, \$30 registration). Six units were proposed:

Organizational Psychology: the morning will focus on organization structure; the afternoon on socio-psychological orientation. This unit will be open for unlimited attendance. The remaining five will be limited to 20 participants each.

Criterion Measurement.

Psychology in International Corporations.

Psychological Testing: covering both technical issues and socio-legislative-ethical issues.

Management Selection and Utilization.

Attitude Development: focused on recent technical developments.

Dr. Baxter suggested that it would be desirable if some way could be devised to make a record of what was said, possibly by means of speaker outlines, supplemented to bibliographies. This suggestion will be explored.

The Executive Committee discussed a Workshop Committee proposal to explore post-doctoral training activities. It was agreed that this was properly a function of the E&T Committee, as a matter of general direction. The Ross report on post-doctoral training may provide leads in this area.

13. Public Relations for the APA Program.

It was agreed that the Program Committee would handle its own public relations at the Convention.

14. Current Status of the Professional Degree.

Institutions represented at the Executive Committee Meeting were reported to be ambivalent toward or opposed to a professional degree program leading to a Psy.D. No definite information on progress of this proposal at other institutions was available.

15. Financial Support for Industrial Projects and Students.

No progress was reported in gaining financial support; the matter was tabled until the Spring meeting.

16. Spring Meeting of APA Council.

It was reported that Drs. Ash and Owens would attend the Spring meeting on March 10-12. The consensus of the Executive Committee seemed to be that the APA Central office should continue an active and vigorous public, professional, and legislative role, and that it ought to be organized to that end. The suggestion was made that Council should closely examine the APA dues structure, with a view toward relating dues to member interests. For example, the notion of a possible distinction between "professional" member dues and "academic"

member dues was suggested. It was also suggested that consideration be given to regional decentralization of APA.

17. Spring Meeting.

The Spring Meeting of the Executive Committee will be held May 20-21 or June 3-4. The specific dates will be determined by a canvass of the Committee.

Respectfully submitted,



Philip Ash
Secretary-Treasurer

New Fellows of Division 14

The name of Ralph Stogdill was inadvertently left off the list of new Fellows of Division 14 in TIP Volume 3, Number 1, although it was mentioned on page 5 of that issue that he had been approved for Fellowship.

CONFERENCE AND MEETING NOTES

EXECUTIVE STUDY CONFERENCE

Lois Crooks
Educational Testing Service
Princeton, N.J.

The Fall-Winter Executive Study Conference, held December 1 and 2 at the Marott Hotel in Indianapolis, had as its theme, "Issues and Concepts in Executive Education and Development." Representatives of the nineteen member companies and other interested participants heard speakers discuss issues affecting overall results, changing concepts in methodology, and problems in application.

William R. Dill of the IBM Corporation discussed some directions which management might take in encouraging self-education among executives. He advocated an approach which would be concerned with individual needs.

William L. Haeberle, University of Indiana, took a pragmatic view, as he developed a model using the variables surrounding management activity. He suggested that the main area left for manipulation concerned values.

John B. Miner, University of Oregon, presented data which showed predictive value of several instruments for success in management within the hierarchical management structure usually found in business organizations. His study is based on a theory of managerial performance which posits that there are certain role requirements occurring frequently across a great variety of management positions and that the crucial factor in individual performance and success is the extent of motivation.

Daniel Glasner of Eli Lilly developed a model which incorporated the variables contributing to organizational climate, to illustrate the effect of such a climate on executive development.

G. Galvin Ermey, A T & T, described a college recruitment program which calls for a counselling and training period of one year under a picked management mentor, with evaluation for company future at the end of the year.

Richard S. Barrett of Science Research Associates presented a case history of an executive training program

developed for a large city, where unique problems of political appointment, limited salary ranges, and bureaucratic philosophies enter into any effort.

Leopold Gruenfeld, Cornell University, reported data from a developmental program for business executives carried on over a number of years at Wabash College to show that benefits were achieved by continuity (two-week sessions for five summers) and breadth (sampling of many areas).

Douglas Bunker of Harvard Business School and Robert J. House, McKinsey Foundation, presented some aspects of laboratory training for management development. Dr. Bunker described values to be derived from such training, but emphasized that it should not be used as therapy for people with problems. Dr. House reviewed some of the research on laboratory training and recommended that candidates be selected carefully and in the light of organization and performance needs, that the T-group leader be adequately trained, and that continued research be done to determine the conditions required to bring about individual and organizational improvement.

Spencer Hayden described some of the problems in carrying our management development programs from the consultant's viewpoint. He advocated visits by management teams to well-managed and successful organizations as a rewarding developmental technique for both the visitors and the visitees.

Harold Wisely of Eli Lilly talked about problems of developing managers in an expanding organization where there is insufficient time to recruit and train the key people needed. He acknowledged the difficulty of getting tradition-minded management to accept the need for change.

John Hemphill of Educational Testing Service, in his overview of the conference, pointed out that few attempts have been made to define goals and objectives before embarking on management training. He suggested that this should be the first step, with the program then tailored to meet these needs.

Fads, Fashions, and Folderol in Psychology --- A Note

It was mentioned in TIP Volume 3, Number 1 that President-Elect Marvin Dunnette's Invited Address at last year's APA convention would appear in this issue.

Today when I returned from the printer after giving "final" approval for this issue, I received a note from Marv saying that his address had been accepted for publication in The American Psychologist and asking that it be withdrawn from TIP.

So to learn of

"The Pets We Keep;
The Fun We Have;
The Names We Love;
The Delusions We Suffer;
The Secrets We Keep;
The Questions We Ask;"

and the "constructive suggestions For Remedy" for these and "The Outcome--Utopia" you will just have to wait for The American Psychologist.

The January 29, 1966 issue of Business Week honors Hugo Munsterberg in the 19th in a continuing series of reports on "famous firsts" of modern management. Entitled "Famous Firsts: Measuring minds for the job" the two-page feature illustrates the wide range of his interest and indicates why he could be described at the time as "America's favorite expert on everything."

ANNOUNCEMENTS OF INTEREST

Grants, Fellowships, and Awards

The Cattell Award

The Division of Industrial Psychology of the American Psychological Association is pleased to announce the third annual award to be given for the best research design in which basic scientific methods are applied to problems in business and industry. The award is known as the James McKeen Cattell Award, in honor of that pioneer in applied psychology.

The award is symbolized by an appropriate certificate, and \$500.00 for the winner. Each person receiving honorable mention will receive an award of \$100.00. However, the major reward to the recipients is the support of Division 14, through its Committee on Scientific Affairs, in obtaining the necessary funding and cooperation for the completion of the projects. The trustees of the James McKeen Cattell Fund have given a grant to the Division in support of the award for its first five years.

Research designs may be submitted by any member of the American Psychological Association, or by a person sponsored by a member.

The award is given for a research design rather than a completed project because the Division wishes to encourage psychologists to make creative and rigorous approaches to industrial problems, uninhibited by considerations of the availability of resources for their implementation. Thus, completed projects will not be considered. However, the fact that some preliminary or pilot work has been accomplished will not be disqualifying nor will previous requests for or reception of funds to assist in the project.

The author of the winning design will determine the extent of his personal participation in the project's implementation. Inability to participate will not be disqualifying.

Entries, and inquiries about the award competition are to be sent to the Secretary of Division 14. To be considered entries must be in his hands by April 1, 1966. The Secretary is:

Dr. Philip Ash
Inland Steel Company
30 West Monroe Street
Chicago, Illinois 60603

SUMMER ASSOCIATESHIPS

For the summer of 1966 Science Research Associates, Inc., will invite several outstanding students to join its staff in Chicago as summer associates. These SRA associateships will be offered to promising students who have completed at least one year of graduate study beyond their bachelor's degree in fields such as tests and measurement, the psychology of learning, and curriculum research in elementary and secondary instruction.

For further information, inquiries should be directed to:

Dr. William V. Clemans
Director, Test and Evaluation Division
Science Research Associates, Inc.
259 East Erie Street
Chicago, Illinois 60611

OTHER ANNOUNCEMENTS

Public Panel On Occupational Test Development

Clifford E. Jurgensen is a member of a public panel serving in an advisory capacity to the Labor Department on occupational test development by and for the United States Employment Service (U.S.E.S.). The six-man committee was appointed last July by Robert C. Goodwin, Administrator, Bureau of Employment Security, United States

Department of Labor. The purpose of the panel is to secure a current objective appraisal of the suitability of USES tests now in use, and to help plan the direction in which the test development program should move in order to meet current needs.

The panel is emphasizing matters of invasion of privacy and development and use of tests with culturally and educationally disadvantaged persons. Related areas of investigation include USES use of commercially available or employer constructed tests; release of USES tests for use by other persons, agencies, and organizations; and development and use of non-language, interest, and other types of tests.

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Robert B. Sleight, President, has announced that Applied Psychology Corporation has broadened its research and consulting activities and changed the firm's name to Century Research Corporation. Its offices are located at 4113 Lee Highway - Arlington, Virginia 22207.

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A new journal, entitled Organizational Behavior and Human Performance, will soon be available to serve the applied psychology community. Scheduled to be a quarterly publication, OBHP will publish its first issue either in August 1966 or January 1967, with the earlier date the more likely. As the name implies, the journal will be devoted to publishing quality manuscripts dealing with fundamental research and theory in applied psychology.

The preference of the journal will be to favor articles in the two major areas of human performance and organizational behavior. The aim is to encourage scientists who work in realistic task settings to contribute to basic behavioral principles.

Anyone interested in further information should contact the editor,

James C. Naylor
Department of Psychology
Ohio State University
Columbus, Ohio

A Past President of Division 14, Edwin R. Henry dropped me a note which I hope he won't object to my sharing with you saying "I decided to take an "early" retirement on 1/1/66 and spend the next few years doing things I want to do and as much as possible when I want to do them. In other words, I hope to keep reasonably busy on "odd jobs" (some folks call it consulting) within my competence anywhere, anytime. Need anything done?

"Am setting up my office at my home

428 Demarest Avenue
Oradell, New Jersey 07649
Phone: 201 262-2221

and look forward to hearing from you."

In practically the same mail, Bob Perloff sent me a copy of a letter which he had received from a consultant containing a definition which Ed can add to his collection "...I'll tell you what a consultant is. He's a man who can insult his former employer and get away with it because he receives a fee to tell people what they once knew. I recommend this way of life as a guarantee of longevity."

There is no doubt that Ed, founding partner of RBH, and developer of an outstanding program of social science research in industry, will have continued success in his profession and I am sure his many friends in Division 14 join me in hoping that this way of life is indeed a guarantee of longevity for him.

Fourteenth Annual Workshop in Industrial Psychology

The 1966 Division 14 Workshops will be held Thursday, September 1 in New York City. This year there will be a session on Organization Psychology which will not have a limitation on the number of participants and five sessions, with the number limited to 20 participants. These Workshop sessions will be: Criterion Measurement; Psychology in International Corporations, Psychological Testing, Management Selection and Utilization and Attitude Measurement.

Plans for this year include some form of follow-up for the participants. The need for a follow-up has been expressed in recent Division 14 surveys.

An announcement providing some details of Workshop emphasis, leaders and follow-up plans will be distributed to Division members later this spring by Erich P. Prien, Chairman of the Workshop Committee.

U.S. Department of Labor Research Program

The Office of Manpower, Automation and Training (OMAT), U.S. Department of Labor, conducts a continuing program of research to provide a better understanding of national manpower problems and the tools for dealing with them. The Office utilizes its own staff resources, those of the Department of Labor and other Federal agencies, and research resources outside the Federal Government.

Under the authority of the Manpower Act of 1965 the Department of Labor may enter into contracts or provide grants for the conduct of research by organizations and individuals outside the Department.

Briefly, the Office provides support for research in the following areas:

- 1) Manpower resources and requirements;
- 2) The nature and conditions of employment and unemployment, including studies of labor mobility, attitudes and motivation of workers and disadvantaged groups in the labor force;
- 3) The nature, extent and pace of technological change, its impact on the economy, the labor force, occupations and skills, and its implications for worker training and education;
- 4) Evaluation and analysis of manpower development and utilization programs; and
- 5) Methodological studies pertaining to any of the above.

Professionally qualified persons are invited to submit research proposals or ideas for consideration. Preliminary submissions should be brief and contain the following in-

formation in nontechnical language:

- 1) Problem to be investigated
- 2) Objectives of study
- 3) Procedures
- 4) Time and budget requirements (summary only).

A review of all manpower research activities of the Department, Manpower Research and Training under the Manpower Development and Training Act of 1962, and a summary listing of research contracts, Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1963 - June 30, 1964, may be obtained from The Director, Office of Manpower, Automation and Training, Washington, D.C. 20210. Detailed information on procedures for submission of contract research proposals is contained in appendices to each of these documents.

Peace Corps Needs Help

The Peace Corps has openings for psychologists both on an annual basis and for work from June 15 to September 15.

The jobs involve assessing Peace Corps trainees during training programs at universities throughout the United States, the Virgin Islands, Puerto Rico and Hawaii. The positions on an annual basis provide some opportunity for overseas work.

The Peace Corps prefers Ph.D's with guidance, counseling and clinical experience but will consider advanced graduate students if they have completed their clinical practicum. Salary is open and commensurate with qualifications of the applicants.

Interested persons should write to:

Dr. Robert B. Voas
Selection Division
Peace Corps
Washington, D.C. 20525

NEWS FROM ACADEMIA

The Psychologist and the Business School Some Further Comments

James C. Naylor
Ohio State University

In the August 1965 issue of TIP, Bass presented a brief discussion of the industrial psychologist located in a business school and the advantages and disadvantages of such an arrangement. In general, his attitude tended to be favorable, with the main premise the point that we have much to gain by working directly in an academic group which has as its major function the problems of industry. He points out some of the objections of psychologists to such an arrangement (e.g., often a fewer number of talented students, a feeling of isolation from psychology, etc.) but leaves one with the conclusion that these disadvantages are outweighed by the advantages of being associated with a more business-oriented discipline.

In addition to the advantages to the research oriented Ph.D., Bass also discusses the effects upon the professional training of graduate students in industrial psychology. This latter aspect of the problem is probably the most crucial dimension to the migration of psychologists to business schools and deserves critical examination.

Implications for Faculty

As an industrial psychologist located in a department of psychology one might logically expect that I would disagree with Bass - which indeed I do. I am completely convinced that the only people to come out ahead in the usual arrangement are the business schools. In almost every case where a psychologist is located in a business school (or its equivalent) you will find that he is typically the most productive and most visible member of that department - the "star" so to speak. These stars provide their foster departments with a cloak of scientific respectability which all too often is really not there if the protective productivity of the psychologist is removed.

Why in the world would a competent (and some of these people are among the most competent in our profession)

industrial psychologist want to work with colleagues who frequently do not share his knowledge or often even his interest in the research function? Bass argues that it is the immediate contact with real business problems that is the major motivation. I would suggest that most psychologists in business schools would rather not be there at all, and that the only reason they migrate to business schools is that there is no other place for them to go!

My point is that in all too many departments of psychology the area of industrial is considered too "applied" to be truly respectable and thus little or no interest is shown in developing a graduate program which in turn would involve hiring an industrial psychology faculty. For example, in 40% of the "Big 10" one finds little indication of industrial psychology within the regular department (Wisconsin, Indiana, Iowa and Northwestern). In certain circles any department having a heavy industrial program has automatically consigned itself to being classed as "second-rate." The reasons for this are far too lengthy and emotion-evoking to discuss here, although I think that the recent TIP article by Perloff on the number of industrial psychologists achieving eminence within the entire profession of psychology and the 1965 Division 14 presidential address by Brent Baxter are both quite relevant.

I would suggest that if one surveyed the psychologists currently in the business schools of the major universities and inquired of each if they would desire to move over to the psychology department if given a reasonably cordial reception by his psychological colleagues that the vote would be a nearly unanimous "yes." They might wish a very close liaison with the business school, but their preference (I would wager) would be to be identified with the Department of Psychology.

How can we overcome this prejudice by certain of our brethren against the applied psychologist? My opinion is that this can only be accomplished by industrial psychology contributing to the theoretical aspects of psychology and human behavior rather than simply using the theory of others. However, as I mentioned above, this topic deserves more notice than is possible here.

Until more psychology departments open their doors to the industrial area, the business school will remain the

only other avenue to an academic career for many highly competent, research oriented Ph.D.'s. For this reason we shall probably see many more of our colleagues establish themselves in this type of setting in the next decade. Thus, while I deplore it, I see no immediate solution.

Implications to Students

A problem of equal concern that much be examined is the question of students who are trained by advisers who are located in schools of business. In other words, should an industrial psychologist have a degree in psychology? My own feeling is an unequivocal affirmative. I identify strongly enough with the basic profession of psychology to feel that we should be psychologists first and industrial types only parenthetically. I am also sufficiently enough of a traditionalist to believe that merely having the knowledge does not make one the professional - one must first go through the appropriate puberty rites as set down by that profession. Thus, a student in a business school may study with Dr. X who is an eminent psychologist, he may take every psychology course offered by the psychology department, and he may do a dissertation on a psychological problem, but he still cannot be considered to be an industrial psychologist unless he has completed all the graduate requirements of the psychology department including the written and oral examinations required of all Ph.D. candidates.

If my position is still unclear, let me simply state that new members to APA and to Division 14 should not be accepted unless they have a Ph.D. granted by a department of psychology. If we begin to depart from this we are inviting the beginning of a lowering of standards and subsequently of quality among our membership.

How, for example, can we otherwise decide who to accept and who to reject? What are the APA and the Division standards going to be? When is a dissertation a "psychological" dissertation? Answer me that one, all you computer model people.

At this point let me indicate that the 1965-1966 Education and Training Committee is adopting the entire "Psychologist in a Business School" question as its major topic. Thus, I hope my own individual reflections given above (which in no way reflects Committee views) may stir up some comments on the part of the membership which will be of great interest. Let's have your thoughts.

THE PSYCHOLOGIST AND THE BUSINESS SCHOOL-- A REPLY TO FURTHER COMMENT

Bernard M. Bass
Graduate School of Business
University of Pittsburgh

Jim Naylor's "Further Comments" in this issue of *TIP* to my original statement in the August, 1965 issue contains some points with which I concur and some with which I must disagree.

One must agree with Jim's aims concerning the need to raise the quality of research and education in industrial psychology. Nevertheless, his assumptions about the current situation among psychologists in business schools and the means he proposes to achieve his aims call for considerable correction.

Let us consider each of his major comments in turn.

"I am completely convinced that the only people to come out ahead in the usual arrangement are the business schools. In almost every case where a psychologist is located in a business school (or its equivalent) you'll find that he is typically the most productive and the most visible member of that department--the "star" so to speak. These stars provide their foster departments with a cloak of scientific respectability which all too often is really not there is the protective productivity of the psychologist is removed."

Naylor's proposition may be flattering and interesting to psychologists but it is simply untrue. Indeed, this comment betrays a parochialism and lack of what the faculty composition is actually like at leading graduate schools of business in the United States today. Hal Leavitt and Vic Vroom at Carnegie Tech's Graduate School of Industrial Administration would be the first to agree that the most illustrious members of the faculty are such persons as William Cooper in Applied Mathematics, who has no Ph.D. in anything, and Herbert Simon, whose educational background was in Political Science and Mathematics. Economists such as Richard Cyert are as prominent among their colleagues in economics as Leavitt and Vroom are among industrial psychologists. Applied

mathematicians and operations researchers such as Jacob Marshak, Abe Charnes and West Churchman are the outstanding figures at their respective business schools at UCLA, Northwestern, and Berkeley. Indeed, while at many of the yet unmentioned other leading business schools such as Harvard, MIT, Yale, Stanford and Chicago, while one finds many prominent Ph.D.'s in Psychology such as Taylor, Bauer, Tagiuri, Bennis, Marquis, Harrell and Hoffman, in no instance, can these men be singled out as the star researchers in their respective schools, schools loaded these days with first rate economists, mathematicians and social scientists other than psychologists.

"Why in the world would a competent (and some of these people are among the most competent in our profession) industrial psychologist want to work with colleagues who frequently do not share his knowledge or often even his interest in the research function?"

In the first part of this comment, Naylor disregards the values inherent in a circumstance where it is possible to work with persons from other disciplines who are interested in the same phenomena but who view the same phenomena from a different point of view. The second part of Naylor's comment indicates he regards what the economist or the mathematician has to say about business behavior as uninteresting to the psychologist. The business school offers contact with economists and mathematicians who are carrying out research in their respective disciplines relevant to the business world. While it is true, location in the business school offers the psychologist more contact with the world of business as such than he might or might not have, located in the confines of a psychology department, it is even more true that location in the business school offers the psychologist more opportunity to interact with mathematicians and economists than would be possible for him imbedded in a traditional psychology department. The disciplinary opportunities afforded the psychologist in the business school make it possible for him to engage in much greater variety of intriguing research. He is more likely to be in a position to work on bigger and broader problems than his colleague in the psychology department. For instance, many of the graduate students in the business school along with their background in economics and mathematics as well as some basic psychology, have had experience already as full-time researchers for management in industry working on various

kinds of problems of consequence to their companies. Minimally, they are likely to have had considerably more industrial experience than the typical graduate student in psychology. Again, as many as half of these graduate students are likely to have undergraduate engineering degrees. As a consequence, they are more knowledgeable about the technical processes of consequence. Moreover, generally speaking, they are likely to be more sophisticated mathematically than the average graduate student in psychology.

In psychology, one's colleagues are likely to be concerned about concepts and methods in general, experimental, psychology or clinical or other related non-industrial fields of psychology. The kinds of problems of mutual interest that one's colleagues present, therefore, usually are theoretical or methodological. It is easiest for the industrial psychologist to slip into the role of one who attempts to apply methods, ideas and theories from the common core of psychology which have relevance to industry. He becomes truly an applied psychologist as a consequence. In an interdisciplinary setting his role is considerably different. Colleagues stimulate him with problems about industry. The basic questions raised concern phenomena and problems in business and industry, not problems and phenomena seen in a psychology laboratory. The psychologist from a psychology department is more likely to engage in applied research to demonstrate once again the utility or the lack of utility of cognitive dissonance theory or partial reinforcement. The psychologist in the business school is more likely to start with the problem such as budgeting behavior and conduct research to develop understanding of the variables involved and the dimensions of consequence. Cognitive dissonance, levels of aspiration, adaptation theory, reinforcement theory and so on, all may figure in his efforts to understand the behavior of the budgeteer, but the probability is greater that a coherent block of information and understanding will develop as a consequence of his focused efforts to understand budgeting behavior.

It is agreed generally that to understand the behavior of a specific individual in a given situation requires an understanding of situational differences as well as individual differences. Even more important is an appreciation of the interaction between individual and situation. One may speculate that the psychologist within the confines of the psychology department is more likely to focus on individual

differences, per se. Perhaps it is too easy for the psychologist in a business school to begin focusing on the situational differences of consequence. Somewhere in between lies the possibilities of generating useful theories of behavior in industrial settings.

"I would suggest that if one surveyed the psychologists currently in business schools of the major universities and inquired of each if they would desire to move over to the psychology department if given a reasonably cordial reception by his psychological colleagues that the vote would be a nearly unanimous 'yes'."

Naturally, a first-rate psychology department is a better location than a second rate business school, but I wager the reverse is also true. In the typical psychology department, the industrial psychologist may find himself almost alone and isolated as far as his interests are concerned. The typical department usually cannot afford the luxury of having a heavy concentration of psychologists in any but such areas as general-experimental or clinical. On the other hand, in some business schools now, as much as one third of the faculty, is either in psychology or in related behavioral sciences. Moreover, a sizeable majority of the entire faculty is likely to have some interest in behavioral aspects of business. And the laboratory facilities for behavioral science research, at Yale, Purdue or Carnegie Tech compare favorably with what is seen in psychology departments. Again, in the business school, when student subjects are used, the students already have some acquaintance with business issues. They can be challenged by complex business games which simulate the business environment and can do a reasonable job of standing in for real business executives. On the other hand, the student subjects available in a psychology department obviously are unusable unless the games in question are extremely simple and the "business" is eliminated from the business game.

"...merely having the knowledge does not make the professional--one must first go through the appropriate puberty rites as set down by that profession"

Why the closed shop? Will this not merely increase the likelihood that we will continue to spin around our own axes and perpetuate incompetence? Why do psychologists, almost

uniquely among the academic disciplines have this strong need to certify, to label, to license? From what I have seen, the problem is not so much that of keeping out competent behavioral scientists from the APA as it is in encouraging such competent individuals to apply for membership in the APA. Many students with or without the Ph.D. in Psychology do not seem to have the burning desire to join APA, to publish in APA journals or to attend APA meetings. Yet, they follow the psychological literature, they engage in what is often excellent psychological research and are distinguished from the "in" group mainly in their identification. Some business schools such as Cornell's are trying to foster identification with a discipline as early as possible by encouraging students in the behavioral sciences in the administration school to concentrate in either psychology or sociology during their entire graduate career.

At Pitt, it is possible for a student concentrating in the behavioral sciences in the business school to take at least half of his graduate work in psychology. For all intents and purposes, such a student will be taking the other half of his courses in applied mathematics, business and economics instead of courses in history, physiological and clinical psychology. His Ph.D. Committee will include economists as well as psychologists. Will he, as a consequence, be less capable of contributing as a research psychologist in industry.

All of the physical sciences cannot be maintained in one department; all the biological sciences cannot be encompassed by one campus department. Psychology has grown to a point such that all the psychological sciences cannot be contained within a single narrowly-defined department. Actually, the student in sensation and perception probably has considerably more affinity to fellow students in the biological sciences than he does with most psychology students. In the same way, it can be argued that the social psychology student often has closer ties to students these days in sociology. We ought to be facing up to the need to think in terms of the psychological sciences rather than psychology. On some campuses like Pitt's, psychologists are scattered from Speech to Pharmacy. Their students may be engaged in first-rate research contributing to the field of industrial psychology. The label of their Ph.D. may be a matter of administrative convenience more than anything else. At Carnegie Tech the typical Ph.D. student is not required to

declare until his last year whether his Ph.D. will be in psychology or industrial administration. I cannot see what our profession will gain by automatically ruling out of APA those who elect to pursue the Ph.D. degree in one rather than the other. I do not propose that we open the doors wide of the APA or Division 14. Rather, I would suggest that minimally we do not adopt any blanket rules about requiring the Ph.D. from a psychology department as the only route to admission to APA or Division 14. Admittedly, applicants without the union card ought to be screened extremely carefully. However, I do feel we owe it to our profession and to many applicants without the appropriate educational label to identify with us and with our research interests if they desire to do so.

"...in all too many departments of psychology the area of industrialist is considered too "applied" to be truly respectable and thus little or no interest is shown in developing a graduate program which in turn would involve hiring an industrial psychology faculty"

To this statement should be added the probability that we've been going backwards rather than forwards relative to the rest of psychology. The Pitt campus is a good case in point. In the early 1950's, the Pitt psychology department was one of the national leaders in the production of Ph.D.'s in Industrial Psychology. Today, Pitt has three senior faculty, John Flanagan, Bob Glaser and me, who are Fellows in Division 14, but none are more than minimally involved in the activities of the psychology department.

Naylor and I have the same concerns and aims. We both agree that industrial psychology is a poor relation to general, experimental and clinical. But we do not agree on the remedies.

For industrial psychology to regain its stature in academia, it seems to me, requires that it find an integral niche in the scheme of things rather than remain an applied extension of general psychology which it now is. For this to occur, industrial psychology should be reconceptualized as organizational psychology, the study of the interaction of man and organization. Essentially, this has occurred already at Michigan, Tennessee and Carnegie Tech.

Dan Katz has argued succinctly that students of interpersonal behavior concentrated on the interaction between the family and the individual. Or, they focused on the interaction of culture and the individual, skipping over what may be an even more important focus of interaction, namely the organization in which the individual is located. Actually, although the label would not imply that industrial psychologists are deeply committed to study in this area, I believe it becomes difficult to do any really hard digging in industrial psychology without running into the problem of the interacting effects of man and organization.

Thus, rather than worrying about making Division 14 more exclusive, I would like to see Division 14 broaden itself to include governmental and military psychologists and any other psychologists interested in man as a member of an organization producing goods or services.

At the same time I would like to see our profession engaged in the education of psychologists for universities, industry and government who are interested in understanding, prediction and control of the dynamic interplay between man and his organization. This requires some familiarity with industrial economics and mathematics as well as with individual learning, motivation and perception.

If Industrial Psychology wishes to become more academically respectable it has to recast itself from the application of psychology to industry to the general study of men in organizations.

An Epistle to Paul*

I don't know whether this is one of the results of all of this ecumenicalism or not, but I recently learned that the graphologist screening candidates for the Episcopal Ministry in one community is a Roman Catholic.

(*Paul Thayer, co-author of "Graphology Revisited" in a recent issue of a non recognized journal".)

LETTER FROM GREAT BRITAIN

Help wanted! Psychometricians, willing to work long hours for comparatively low wages are needed in the United Kingdom. Chances for advancement are few but minimum supervision is provided and there are abundant opportunities to work on important problems - problems which have immediate effect upon the destiny of hundreds of thousands of school children. Computer facilities are usually available but suitable programmes may be difficult to obtain. It is refreshing however that more emphasis is still placed on clarity of exposition than upon complex and apparently sophisticated statistical tables. Thoughtful and thorough reports are very likely to lead to major decisions involving large sums of money effecting great numbers of people. In the last two years educational and psychological research has been given a new lease of life in Britain; a considerable amount of energy and money is being poured into studies concerning Secondary School Examinations, I.Q. (a British Intelligence test is being developed), university selection and other related topics.

Prospective expatriates with promising background may be interviewed 'by proxy' in the U.S.A. Those travelling to Russia for the International Conference in the Summer can possibly be interviewed in Moscow or in London on their return journey.

Any offer of employment is contingent upon receipt of a work permit from the British Ministry of Labour Office which normally takes 6 - 8 weeks with no certainty that it will be granted. Employment contracts will include a three month probationary period.

Commencing salaries with the equivalent university titles are approximately as follows:-

Senior Research Officer or Senior Lecturer: Ph.D., plus a wealth of experience; £2400.

Research Officer or Lecturer: Ph.D., or M.A. plus some experience; £1400 to £1900.

Assistant Research Officer or Assistant Lecturer: B.S. or B.A. with limited experience; 900.

Rent, income tax and other expenses even in London are slightly lower than those in similar large American cities. National Health insurance (which means that medical expenses are negligible) and a different standard of living overall suggest a \$3.50 'real' exchange value for the pound. Researchers can survive.

Successful applicants will have to pay for their own transatlantic transportation, find their own housing and, therefore, people with independent means are preferred. Those with teaching and/or research experience will be given extra consideration. Professors on sabbatical, senior researchers and other senior psychometricians are very welcome to apply but they should be prepared to enjoy occasional routine activities with limited staff or facilities.

Does all of this sound a bit absurd? There are about 50,000 American civilians (including a few psychologists) permanently resident in the United Kingdom who find the environment congenial. The 'natives' tend to mind their own business; they generally refrain from competing with other people for material possessions and they seem quite happy for the opportunity to be exposed to (or ignore) the affirmations of communists, flat earth society members and other individuals who might express divergent opinions. What can we offer? Experience and life in another country as well as an opportunity for personal and professional growth. What have you got to offer?

Applicants are requested to air mail a resume of their background and experience to the address below. Every effort will be made to circulate these resumes among research organizations with the greatest need. Promising applicants will be so advised by interested organizations.

Operation Brain - Gain

National Foundation for Educational Research,
The Mere, Upton Park,
SLOUGH, Buckinghamshire,
London.

Larry S. Skurnik
Gerald Randell

RESEARCH NOTES

The Richardson Foundation has recently made a grant to Marvin D. Dunnette, Karl E. Weick, John P. Campbell, and Edward E. Lawler to conduct a national survey of research being done in both industrial and academic settings on the identification and emergence of managerial and executive potential. The project has been designed to focus on research in two areas of management effectiveness. First, it is to consider research on ways of identifying management potential; and second the researchers are interested in identifying those factors moderating individual difference variables so as to facilitate or to inhibit the emergence of effective management job behavior.

A limited number of reprints of an article "Public Opinion and the Outbreak of War" by Joel T. Campbell and Leila S. Cain are available from Joel T. Campbell, Developmental Research Division, Educational Testing Service, Princeton, New Jersey 08540.

Ed Henry suggested that members might be interested in knowing of the availability of the Proceedings of the Richardson Foundation "Research Conference on the use of Autobiographical Data as Psychological Predictors." The material will be available in March and may be obtained without charge by writing:

Mr. Robert Lacklen
The Creativity Research Institute
Richardson Foundation
Piedmont Building
Greensboro, North Carolina

President Ross Stagner is author of "Conflict in the Executive Suite" in *Trans-action*, Volume 3, Number 2, January-February 1966. Based upon interviews with "about fifty vice-presidents (or equivalents) in ten major corporations (employing from 2,000 to 50,000 persons each) in the eastern United States," the article deals with how major industrial corporations settle high-level conflicts on vital policy decisions.

Incidentally, Ross is terminating his stay in London and will be back at Wayne State about February 20.

PROFESSIONAL NOTES

First Biennial Survey of the Salaries of Industrial Psychologists (1964)

Frederic R. Wickert
Michigan State University

Introduction. Industrial psychologist employers who are members of Division 14 have come to expect, as one of the services Division 14 provides for them, periodic surveys of the salaries of industrial psychologists. Knowledge of current salary levels puts them in a stronger position to justify salary adjustments for the psychologists in their organizations. It is also expected, of course, that employed industrial psychologists in general will be interested in salary survey results, as well as might present and prospective students of industrial psychology.

The most recent previous survey of salaries of industrial psychologists was carried out for the year 1960 by Dunnette (1961). It was generally understood in the Division that a similar survey should be conducted about every five years. This year was time, then, to conduct another survey. It occurred to the Division that instead of going to the trouble and expense of conducting its own survey, it might be possible to take advantage of the biennial survey made by the National Register of Scientific and Technical Personnel in the field of psychological science conducted by the American Psychological Association and the National Science Foundation. The most recent year that such a survey was conducted was for the year 1964. Many of the more important tab runs of the 1964 survey data were finally made available to A.P.A. and then promptly to the Division by late summer 1965, thanks to the very real and intelligent cooperation of the Manpower Resources Division (Dr. Forrest Vance and Miss Bertita Compton) of A.P.A.

There are advantages and disadvantages in using the National Register survey results as compared with Division 14's conducting its own survey. A few words about these will help the reader in interpreting the National Register results reported here.

Obvious advantages in using the National Register data are the relatively little work and no expense to the Division

(unless special tabulations are desired). Another advantage is the opportunity to obtain data as often as every other year rather than wait five years between surveys. Probably the main advantage is that the National Register includes all persons who fill out the forms and call themselves industrial psychologists, not only Division 14 members. What this means is a bit complicated. For 1964 the National Register showed 1,367 persons who called themselves industrial and personnel psychologists. Of these, 1,160 reported incomes. Over 90% of the holders of the Ph.D. degree in all fields of psychology responded, but only 73% of all psychologists answered. (In all, 16,804 psychologists returned usable survey forms.) The data, then, are somewhat more dependable and inclusive for the Ph.D. as compared with non-Ph.D. psychologists. The percentages responding among industrial psychologists at Ph.D. and less than Ph.D. level were not separately reported. The above Ns and per cents responding in the National Register survey compare with the 269 usable returns or 73% of 359 Division 14 members (every other member) queried in the Dunnette survey of 1960. It is likely, then, that the National Register salary figures, based as they are on a larger and more inclusive sample, may be more generally valuable than the more restricted sampling that could be carried out within Division 14's resources.

In order further to understand the population drawn on by the National Register survey, it is helpful to mention what the National Register says about the people it sent questionnaires to for the 1964 survey. These were "individual scientists with full professional standing ... based on academic training and work experience, as determined by the appropriate scientific professional society," in our case, A.P.A. "... Questionnaires were mailed to known qualified scientists and to potentially or possibly qualified individuals for whom addresses were available." As the returns came in, the societies eliminated duplications and individuals whom they found to be unqualified. Since the surveys have been going on for some years and the procedures continue to be gradually improved, the National Register thinks its coverage is also gradually improving. The National Register believes that for the wide variety of sciences surveyed, "75% of those qualified for inclusion are in the National Register." The National Register (1964) reports that plans are underway to determine the extent and characteristics of non-respondents in an attempt better to understand the

deficiencies in the data brought about by the failure to reach and include some otherwise eligible persons. Naturally the reports of such studies are far from being available yet, but they may help in interpreting future salary surveys Division 14 bases on National Register data.

As was suggested above, there are also disadvantages to drawing on the National Register data. For one thing, the Division loses the opportunity to compare parallel 1964 data with 1960 data in order to get at trends. The very categories of industrial psychologists that the National Register uses as well as the populations, are different.¹ However in the future years the Division can study trends in National Register figures, and, of course, could get reports from past National Register surveys to make whatever analyses of past trends might be desired. National Register data are preserved indefinitely to be drawn on, when the need arises, by specialized scientific interest groups like Division 14.

All in all, the advantages of turning to National Register surveys instead of doing our own appear so great that it is probably worth making the shift.

It might also be mentioned in passing that the present report limits itself to basic salaries alone. It does not go into both "primary" and "total" income as did the Dunnette

¹ A good example occurs in reporting the numbers of industrial psychologists working for different categories of employers. The categories are to some extent similar yet in other ways different.

Type of "employment"	Dunnette 1960		National Register 1964		Type of "employer"
	N	%	N	%	
"Industry" (Manufacturing, Trade, Banking and Insurance)	87	32	623	53	"Industry and Business"
"Academic"	79	29	223	19	"Educational Institutions"
"Private practice and consulting"	64	24	64	5	"Self-employed"
"Government," and "Construction, Transportation, and Public Utilities"	39	15	265	23	"Government," "Non-profit organizations," and others
Total	269		1175		

The table shows that the National Register sample included a smaller proportion of academic industrial psychologists than did the Dunnette Survey, but it is hard to directly compare the other categories in any too meaningful a way. The category names and, by implication, what they include, are simply too different.

Table 1. Numbers, and median annual salaries, of scientists-in-general, psychologists-in-general, and industrial and personnel psychologists by work activity, 1964.

Group	Total	Work Activity								
		Research and Development		Management or Admin.		Teaching	Prod. & Insp.	Other Employed	No report of work activity	
		Total	Basic Research	Applied Research	Total*					R & D
Numbers										
Scientists-in-general	223,854	77,699	35,781	30,280	46,255	41,209	16,582	26,301	9,617	6,191
Psychologists-in-general	16,804	4,108	1,397	2,595	2,849	3,670	11	5,148	688	360
Industrial Psychologists	1,160	214	17	133	481	136	8	305	0	16
Median Salaries										
Scientists-in-general	\$11,000	11,000	11,000	11,000	14,500	8,900	9,800	10,500	--	11,100
Psychologists-in-general	10,300	10,000	10,500	9,800	13,000	9,300	--	10,200	--	10,200
Industrial Psychologists	13,200	11,800	--	11,700	15,000	10,000	--	14,400	--	--

Note: No median was computed for groups with fewer than 25 registrants reporting salary.

*Includes management or administration of activities other than research and development that were not separately identified.

survey. Total income figures could be made available from the National Register data only through asking for special machine runs. However, since basic salary rather than total income tends to be the major concern of employers, the group for whom these data were originally assembled, total income figures were neither obtained from the National Register nor here reported.

Survey results. For the first time, now that Division 14 has turned at least this once to National Register data, the Division is in a position to compare salaries of industrial psychologists with those of scientists in general and psychologists in general. (Obviously any figures reported here for both these groups include those of industrial psychologists, and psychologists in general are included among scientists in general, so anyone trying to work out the statistical significance of differences might want to correct for this effect.) The relevant data appear in Table 1.

A glance at the N's in the top half of Table 1 tells some interesting things about industrial psychology that have at least an indirect bearing on salaries. For example, while about four percent of both scientists in general and psychologists in general report that they are unemployed, no industrial psychologists say they are in this condition. Also, while not so high a proportion of psychologists in general are engaged in basic research as are scientists in general in this country, a far smaller proportion of industrial as compared with psychologists in general are so engaged, not surprisingly.

Another difference occurs in the proportion of industrial psychologists concerned with teaching. While around 20% of scientists and psychologists in general are so engaged, only about 14% of industrial psychologists say they teach. Industrial psychologists no doubt depend, probably wisely, on some psychologists-in-general to do teaching for industrial psychology and industrial psychologists probably tend not to be much involved, in teaching non-industrial students.

As far as salaries are concerned, industrial psychologists do better than psychologists in general and a little better than scientists in general.

So much for comparisons with non-industrial psychologists. Next we turn to comparisons among various sub-groups within industrial psychology.

Table 2. Numbers, and salary level breakdowns, of industrial and personnel psychologists by work activity and highest educational degree obtained, 1964.

Highest educational degree groups	Total	Research and Development			Management or Admin.		Teaching **	Prod. & Insp.	Other	Not Employed	No report of work activity
		Total	Basic Research	Applied Research	Total*	R & D					
Ph.D.	665	116	14	93	229	128	119	1	192	--	8
Lower decile	9,600	10,000	--	9,900	12,500	12,400	7,800	--	10,000	--	--
Lower quartile	11,700	11,500	--	11,400	14,200	14,000	9,000	--	12,000	--	--
Median	14,500	13,000	--	12,700	16,800	16,500	10,800	--	16,000	--	--
Upper quartile	18,000	15,000	--	15,000	20,000	20,000	13,000	--	20,000	--	--
Upper decile	22,500	18,000	--	17,000	24,500	25,000	16,000	--	25,000	--	--
Master's	417	91	3	84	206	61	15	--	99	--	6
Lower decile	8,100	8,000	--	8,000	9,800	9,600	--	--	8,100	--	--
Lower quartile	9,700	9,000	--	9,000	10,300	10,800	--	--	10,000	--	--
Median	12,000	10,000	--	10,000	12,500	13,100	--	--	12,500	--	--
Upper quartile	15,000	12,100	--	12,100	15,800	16,000	--	--	16,000	--	--
Upper decile	19,500	14,000	--	14,000	20,000	20,000	--	--	21,000	--	--
Bachelor's	74	7	--	6	44	7	2	6	13	--	2
Lower decile	7,800	--	--	--	10,200	--	--	--	--	--	--
Lower quartile	10,400	--	--	--	11,200	--	--	--	--	--	--
Median	12,600	--	--	--	14,000	--	--	--	--	--	--
Upper quartile	15,600	--	--	--	17,000	--	--	--	--	--	--
Upper decile	20,000	--	--	--	24,000	--	--	--	--	--	--
Total of Ph.D.'s, Masters & Bachelors combined	1,180	214	17	183	481	197	136	8	305	--	16
Lower decile	8,800	8,400	--	8,400	10,000	10,800	7,700	--	9,300	--	--
Lower quartile	10,000	10,000	--	9,800	12,000	12,600	8,600	--	11,600	--	--
Median	13,200	11,800	--	11,700	15,000	15,700	10,000	--	14,400	--	--
Upper quartile	17,000	14,400	--	14,000	18,000	18,500	12,000	--	19,500	--	--
Upper decile	20,400	16,500	--	15,900	22,000	24,000	15,000	--	25,000	--	--

* Includes management or administration of activities other than research and development that were not separately identified.

** This column unfortunately reports an unknown mix of 9-10 month and 11-12 month academic salaries. On the National Register questionnaire respondents did indicate which salary they were reporting, but in the tabulations immediately available the separation had not been made.

Note: No salaries are reported for groups with an N smaller than 25.

Table 2 shows the salaries by work activities for industrial psychologists. Notice that the work activity categories are the same as those in Table 1. Table 2, then, simply reports details for industrial psychologists which were not of sufficient interest for us to go into for scientists and psychologists in general. The added details are those of (1) educational level and (2) some convenient points on the distributions of salaries (upper and lower deciles and quartiles and medians). First it can be seen that Ph.D.'s outnumber the non-Ph.D.'s only by about 3:2 (as compared to a 3:1 ratio in the Dunnette survey of 1960). Ph.D. salaries run better than M.A. salaries in all categories. Curiously, however, those relatively few with no more than bachelor's degrees seem to do slightly better salary-wise than those with master's degrees.

Regarding salaries of those in the various work activity categories that the National Register uses, it is clear that those industrial psychologists in management or administrative work, as well as those in the upper brackets of "other", do best.

Those in teaching are paid distinctly lower salaries. The lower salaries reported for teaching may in part be a function of some 9-10 month salaries included in the totals (see footnote ** for Table 2). The presence of an appreciable number of such salaries would depress academic salary levels as compared to the 12 month salaries reported by other categories of industrial psychologists. Moreover, Dunnette's 1960 survey shows that total incomes for academic psychologists were more "beefed up" by outside earnings than were those of non-academic industrial psychologists. However, this beefing up was far from enough to bring average academic salaries at all close to those of their non-academic colleagues in 1960. No data were immediately available to pick up the 1964 facts on this point.

Effects of age on primary salaries is shown in Table 3. Ages 50-54 appear to be the peak salary years, except for the lower-paid among those industrial psychologists who have gone no farther than the master's degree. They attain their peak salary years slightly earlier. Dunnette's data, however, with smaller N's than the National Register data and excerpts of which are given in Table 4, do not show the slight decreases after age 54 that the National Register data do.

The fastest rise in salaries seems to occur before ages 35-40. After that, the rate of increase flattens out.

Table 3. Numbers, and salary level breakdowns, of industrial and personnel psychologists by age and highest educational degree obtained, 1964.

Highest educational degree group	Total	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65
Ph.D.	665	1	20	77	136	166	104	87	45	22	7
Lower decile	9,600	--	--	8,500	9,000	10,000	9,900	11,100	10,400	--	--
Lower quartile	11,700	--	--	10,300	12,000	12,000	12,000	13,000	12,500	--	--
Median	14,500	--	--	12,000	14,500	15,000	16,000	16,800	16,000	--	--
Upper quartile	18,000	--	--	14,400	18,000	18,000	18,500	20,000	20,000	--	--
Upper decile	22,500	--	--	18,000	21,000	22,800	23,000	27,500	25,000	--	--
Master's	417	--	29	73	105	103	51	32	16	7	1
Lower decile	8,100	--	6,100	8,000	8,500	9,600	10,000	8,700	--	--	--
Lower quartile	9,700	--	7,000	9,200	9,600	11,000	12,000	10,500	--	--	--
Median	12,000	--	8,000	10,000	11,500	13,000	14,000	14,000	--	--	--
Upper quartile	15,000	--	9,000	11,600	14,000	16,000	16,800	17,000	--	--	--
Upper decile	19,500	--	10,200	13,200	17,000	20,000	20,000	22,500	--	--	--
Bachelor's	74	1	2	10	12	18	12	11	6	2	--
Lower decile	7,800	--	--	--	--	--	--	--	--	--	--
Lower quartile	10,400	--	--	--	--	--	--	--	--	--	--
Median	12,600	--	--	--	--	--	--	--	--	--	--
Upper quartile	15,500	--	--	--	--	--	--	--	--	--	--
Upper decile	20,000	--	--	--	--	--	--	--	--	--	--
Total of Ph.D.'s	1,160	2	51	160	253	287	169	131	88	31	8
Masters and Bachelors Combined	8,800	--	6,500	7,900	8,700	10,000	9,900	10,000	10,000	10,000	--
Lower decile	10,600	--	7,300	9,300	10,300	11,800	12,000	12,000	12,000	11,000	--
Lower quartile	13,200	--	8,700	11,000	13,000	14,500	14,700	15,500	14,000	14,000	--
Median	17,000	--	10,000	13,000	16,000	17,500	18,000	20,000	19,000	19,200	--
Upper quartile	20,400	--	11,400	16,700	20,000	21,200	22,000	25,000	24,500	20,200	--

Note: No salaries are reported for groups with an N smaller than 25.

It would have been useful to have these data broken down by work activities (Table 2) or even type of employer (small table in footnote, p.35). However, the numbers of persons in too many of the cells becomes too small to yield satisfactorily reliable salary data. All that can be done at present with the immediately available data is to consider that both age and work activity have marked effects on salary level.

Table 4 has been included to try to relate in small part

Table 4. Numbers, and quartile annual salary levels, of personnel and industrial psychologists with Ph.D.'s and M.A.'s in 1960 (Dunnette) as compared with 1964 (National Register).

	34 and younger	35-39	40-44	45-49	50-54	55 and older	
Ph.D. 1960	27	31	30	26	15	16	
Lower quartile	11,000	12,400	12,000	12,500	12,000	16,060	
Median	12,000	14,700	15,000	15,000	16,000	20,500	
Upper quartile	16,500	18,000	18,800	18,000	20,000	25,750	
Ph.D. 1964	30-34	35-39	40-44	45-49	50-54	55-59	60 and older
Lower quartile	77	136	166	104	87	45	29
Median	10,300	12,000	12,000	12,000	13,000	12,500	--
Upper quartile	12,000	14,500	15,000	16,000	16,300	16,000	--
	14,400	18,000	18,000	18,500	20,000	20,000	--
Master's 1960	34 and younger	35-39	40-44	45-49	50-54	55 and older	
Median	8	18	9	5	1	3	
	9,000	12,000	12,000	14,000	18,000	--	
Master's 1964	30-34	35-39	40-44	45-49	50-54	55-59	60 and older
Median	73	105	103	51	32	16	8
	10,000	11,500	13,000	14,000	14,000	--	--

Dunnette's 1960 data to the National Register data for 1964. At both the Ph.D. and Master's levels the salaries for 1960 and 1964 look very close, except for the higher 1960 salaries for the 55 and above age group. At first glance it might appear that salaries did not increase from 1960 to 1964. However, it is my opinion that Division 14 members, as the industrial psychologists who have gone to the extra effort to affiliate with the Division, draw higher salaries and possess qualifications superior to the larger numbers of those who simply call themselves industrial psychologists when asked to check, on a questionnaire, one of a limited number of possible psychological specialties. Future salary surveys for the Division should seek to obtain evidence on this point. One straw in the wind is provided by some data mentioned above in connection with the discussion of Table 2, namely, the Division 14 ratio between Ph.D.'s and Master's in 1960 was about 3:1 while the National Register ratio in

1964, when educational levels should be slightly higher, was only about 3:2.

Conclusions. Salary data comparing industrial psychologists with psychologists in general and scientists in general indicate that on the average industrial psychologists receive higher primary incomes. When older Ph.D. psychologists with management responsibilities are compared with younger, non-Ph.D.'s without management responsibilities, it comes as no surprise that the former receive higher salaries than the latter. Detailed salary norms are presented in the tables to assist in making specific comparisons.

The several attempts to compare 1960 data with 1964 data, despite some obvious features of the two sets of data that make comparisons difficult, at least strongly suggest the possibility that Division 14 members constitute somewhat of an elite within the broad field of industrial psychology.

References

- Dunnette, M.D. Incomes of industrial psychologists. Amer. Psychologist, 1961, 16, 503-511.
- National Science Foundation. Salaries and professional characteristics of U.S. scientists, 1964. Reviews of Data on Science Resources, 1964, 1 (2), 1-8.

Note for those of you who don't read the Minutes of the Executive Committee Meeting

The Personal History Item Catalog which was listed in Volume 3, Number 2 as being available is currently out of print. Arrangements are being made for a reprinting and its availability will be announced in TIP.

EDITORIAL NOTE

One of the joys of getting out TIP is learning new things or getting refutations to "things everybody knows." Long ago, I was told psychologists can't agree on anything, that things given away are rarely valued, that people never write letters giving praise and seldom make constructive comments, and that recipients of criticism don't appreciate it.

Let it no longer be said that psychologists cannot agree on anything. Joseph Margolin, President of the District of Columbia Psychological Association, reporting on results of a poll taken recently to determine sentiment toward licensing legislation for D.C. psychologists wrote that of 634 respondents, 89 percent said "Yes" or "Probably" only four percent said "No" and about seven percent were undecided or did not respond to the question which asked for reactions to licensing.

I can remember a renowned psychologist saying that perhaps one reason why the USES did not prosper as much as it should is that the USES was giving their services away "for free" and, he said, nobody values anything for which there is not a good price attached. We have not had that "trouble" in giving away free copies of TIP to schools having graduate programs in Industrial Psychology, but there are still skeptics, as the following excerpt from a letter from the Chairman of one department will testify: "It is so seldom that a departmental chairman can get something for nothing that I hasten to ask for free copies of TIP for distribution to industrial psychology students....There must be a catch in this somewhere."

Of course, the catch is that we hope to have these students become members of the Division as soon as they are eligible. Currently, we are sending out about 315 copies in answer to requests from 21 of the 34 schools offering the Ph.D. in Industrial Psychology.

Another indication that TIP might be considered of value, at least by one recipient of free copies, is that I was told by one graduate student that he had given his copy to an industrial psychologist in industry who had interviewed him for a job, with the suggestion that one of the benefits of belonging to Division 14 would be to receive TIP regularly.

We have, of course, received feedback that the Volume 2, Number 3 was valued. One of the largest corporations in the United States asked for permission to reprint the Motorola article for distribution to all of their industrial

relations executives; and we have had requests from universities; union officials, corporation executives, libraries, and consultants for copies of this particular issue.

And yet another indication, a well known psychologist wrote complaining "your coupons in TIP require mutilation of the mag if one uses them." I'm not certain whether it will make him feel better or worse to learn that at the recent Executive Committee meeting it was suggested "there was a lot of white space in this issue where you could have put in some more material or coupons about joining the Division."

I'm sure that the "well known psychologist" knows that we don't believe in arbitrary rules and regulations and that we in the Division are not so compulsive that we would not honor requests that come on postal cards or in letters rather than on our nice neat little coupons.

His note showed, however, that he wanted to preserve TIP in its pristine beauty for posterity and he took the time to let us know this. Incidentally, Bob Perloff and I have received many more letters than we had a right to expect. And I would like to add that I do appreciate the comments on the articles and the typography of TIP. And following the suggestions of one correspondent, in the future, I will try to be consistent and list middle initials for those officers and members of the committees who have them, will list all committee members when they are known, will look up ZIP codes for Regional Editors, will let people know Purdue is in Lafayette, Indiana, and will try to be consistent in signing things I write either "John B." (my preference) or "JB" (his preference) and not mix the two helter-skelter throughout one issue, and I will also ask the printer to have the "John B." or "JB" appear at the same distance from the margin after each note. But now that I'm responsible (or guilty) for the notes appearing, is there really a need for a signature.

Before closing, I would like to say that up to now, I still have not received a comment or reply to the "stimulating and provocative" speech by Baxter nor to the editorial closing out Bob Perloff's reign at TIP. Are there really so few industrial psychologists who like to write letters to the Editor on issues.

John R. Boulger

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